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A.D. 1853 . . . . . N° 2548.

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S P E C I F I C A T I O N

OF

WILLIAM WOOD.

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APPARATUS FOR CONDENSING SMOKE  
FROM FURNACES &c.

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L O N D O N :

PRINTED BY GEORGE E. EYRE AND WILLIAM SPOTTISWOODE,

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NEAR FLEET STREET.

1854.





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**Apparatus for Condensing Smoke from  
Furnaces, &c.**

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**PROVISIONAL SPECIFICATION** left by William Wood at the Office of the Commissioners of Patents, with his Petition, on the 3rd November 1853.

*(Void by reason of notice to proceed not having been given within the  
5 time prescribed by the Act.)*

I, WILLIAM WOOD, of 126, Chancery Lane, in the City of London, Civil Engineer, do hereby declare the nature of the said Invention for  
“**ABSTRACTING AND CONDENSING SMOKE ARISING FROM STEAM ENGINES AND  
OTHER FURNACES, AND OBTAINING A SUPPLY OF AIR FOR SUPPORTING THE  
10 COMBUSTION OF THE FUEL IN SUCH FURNACES, THEREBY SUPERSEDING THE  
NECESSITY OF CHIMNEY SHAFTS AND FUNNELS,**” to be as follows:—

The smoke is abstracted by means of fans, having a rotary motion communicated to them by means of wind, water, steam, air, compressed air, gas, galvanism, electro-magnetism, animal, manual, or any other  
15 known power, working in a box having a communication with the flue or flues of the furnace or furnaces by means of pipes entering at both sides of such box, thereby producing a partial vacuum, and causing the necessary supply of air to rush through the furnace to support combustion, likewise the centrifugal force, by which the smoke is  
20 forced into the water necessary for its condensation, as shewn in the accompanying Drawing, described as follows:



*Wood's Impts. in Apparatus for Condensing Smoke from Furnaces, &c.*

N° 1, is the side elevation of the box containing the fans, the side flues communicating with the furnace, the descending funnel or funnels, wherever it may be considered necessary to have more than one, communicating with the water necessary for condensation, and the wheel or pulley communicating with the power causing the rotary motion. 5

N° 2, is the end elevation, shewing the same parts as N° 1, in a different position.

N° 3, is the longitudinal section of the same, shewing the inside of the box, with the fans, spindle, the pipe communicating with the flue, the funnel communicating with the water necessary for condensation; 10 the arrows shew the course of the smoke.

N° 4, is the transverse section of the same, shewing the same parts as in N° 3, but in a different position, and a section of the wheel communicating with the power causing the rotary motion.

The different parts in the Drawing referred to in this Specification 15 are marked as follows :

A, the pipe, forming a communication with the flue or flues of the furnace, made of metal or other substance.

B, the box made of metal or other substance enclosing the fans.

C, the shaft on which the fans are fixed. 20

D, D, D, D, D, D, the fans, made of metal or other substance, the number of which may be greater or less than shewn in the Drawing, and either curved parallel to the radius of the circle formed by their revolutions or at an angle with the radius.

E, E, the funnel communication with the water necessary for con- 25 densation of the smoke, and which may be branched off in one or more directions, as circumstances may require.

F, F, the wheel fixed on the same spindle with the fans, communicating by band, strap, chain, rope, or gear work, as may be considered 30 necessary, with the power causing the rotary motion.

LONDON :

Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,

Printers to the Queen's most Excellent Majesty. 1854.